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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,658	01/13/2006	Hans-Helmut Bechtel	DE0300247	9677
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EXAMINER				
SUCH, MATTHEW W				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/564,658

Applicant(s)

BECHTEL ET AL.

Examiner

Matthew W. Such

Art Unit

2891

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3, 5 and 6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 5 and 6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claim 1 objected to because of the following informalities: the word "form" in Line 12 of the claim should read "from" and the phrase "the viewer" in Line 12 of the claim should read "the observer" in order to maintain proper antecedent basis throughout the claims. Appropriate corrections are required.
2. Claims 3 and 5-6 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The recitations of claims 3 and 5-6 are merely directed to recitations of claim 1 which do not comprise the electroluminescent device (as noted below in the rejection of claims 1, 3 and 5-6 under 35 U.S.C 112, second paragraph). As such, claims 3 and 5-6 also do not further limit claim 1. Furthermore, even under the provisional interpretation that the language of "equipped with" in claim 1 reads "comprising", then recitation of claim 6 that "a pattern of the metallic structure matches an existing pattern in the layer assembly" does not limit how the metallic structure matches the existing pattern or what the existing pattern of the layer assembly is. Therefore, any arbitrary configuration would also meet claim 6.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it

pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claim requires "wherein a width of the metallic structure that obstructs the light [from] the [observer] is not more than 10% of portions of the surface of the substrate that are in contact with the first electrode". However, the specification does not teach that the width of the metallic structure is not more than 10% of portion of the surface of the substrate that are in contact with the first electrode. The specification merely teaches (i) "that the metallic structure covers no more than 10% of the surface of the substrate" and (ii) "that the surface of the substrate that adjoins the first electrode 2 comprises up to 10% of the metallic structure" (see Page 5, Lines 13-16). The first teaching (i) does not teach that the surface of the substrate is limited to a portion in contact with the first electrode and the second teaching (ii) merely teaches that the substrate surface in contact with the first electrode comprises up to 10% of the metallic structure (not the entire metallic structure).

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1, 3 and 5-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "equipped with" does not limit what the electroluminescent device actually comprises and, as such, does not actually require any of the recitations following the term "equipped with". The entirety of the phrase "a substrate having a surface, a metallic structure incorporated into the substrate, and a layer assembly on the surface of the substrate, the layer assembly comprising at least a first electrode, an electroluminescent layer and a second electrode, wherein the metallic structure is in electrical contact with the first electrode, and a layer resistance of the metallic structure is lower than a layer resistance of the first electrode, wherein light travels through the first electrode and the substrate to an observer, and wherein a width of the metallic structure that obstructs the light from the viewer is not more than 10% of portions of the surface of the substrate that are in contact with the first electrode" are not required elements limiting scope of the claim 1 because the claim merely requires that the electroluminescent device be "equipped with" these recitations and not that the electroluminescent device comprises these recitations. As currently written, the claim only requires an electroluminescent device, which can be anything since the claim does not provide any structural features which actually comprise the device.

However, for compact prosecution, the examiner provisionally interprets claim 1 with the word "comprising" in place of "equipped with".

7. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim recites "wherein a width of the metallic structure that obstructs the light [from] the [observer] is not more than 10% of portions of the surface of the substrate that are in contact with the first electrode". However, the claim does not actually require that any portion of the first electrode actually be in contact with the substrate. As such, since the first electrode does not have to be in contact with the substrate, one can chose a first electrode that is not in contact with the substrate and the recitation of the claim is met. Furthermore, since a "width" is merely a one-dimensional description, it is unclear how light can be obstructed by an object that requires only one-dimension in physical space. Also, the recitation of "a width of the metallic structure that obstructs the light" renders the claim indefinite because it is unclear whether all of the metallic structure or some of the metallic structure obstructs light and how much light must obstructed to be considered as a width of the metallic structure.

For the purposes of compact prosecution the examiner provisionally interprets that the cross-sectional area the metal structure in contact with the first electrode is 10% or less than the cross-sectional area of a surface of the substrate on which the first electrode is formed.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. In so far as definite, claims 1, 3 and 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hosokawa (EP '035; as supplied to applicant with Office Action dated 29 November 2006) in view of Terao ('581).

Hosokawa teaches in a "first invention" (shown in Fig. 1 and described in Page 5, Line 44 through Page 9, Line 52, at least) and a "second invention" (as shown in Fig. 8b and described in Page 9, Line 54 through Page 12, Line 49, at least), an electroluminescent device equipped (comprising) with a substrate (Elements 1 and 6 in combination in Fig. 1 or Elements 1 and 11 in combination in Fig. 8; at least) and a metallic structure strips (any one of Element 5, at least) incorporated in the substrate and a layer assembly (Elements 2, 3, 4, at least). The layer assembly comprising a first electrode (Element 2, at least) in electrical contact with the metallic structure, an electroluminescent layer (Element 3, at least), and a second electrode (Element 4, at least). The resistance of the metallic structure is lower than the layer resistance of the first electrode (see, for example, Abstract and Disclosure of Inventions sections) and the thickness of the metallic structure strips is greater than the thickness of the first electrode (Figs. 1 and 8b with associated text, for example). The examiner notes that the recitation of "a pattern of the metallic structure matches an existing pattern in the layer assembly" does not limit how the metallic structure matches the existing pattern or what the existing pattern of the layer assembly is. Therefore, any arbitrary configuration between the metallic structure and layer assembly meets claim 6.

Furthermore, the language of “wherein light travel through the first electrode and the substrate to an observer”, does not distinguish the claim from the structural limitations of the prior art. While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997). See MPEP § 2112.01.

Although Hosokawa teaches that it is advantageous to have width of the metallic structure (and hence, cross-sectional area of the surface of the metallic structure parallel to the surface of the substrate with the first electrode formed thereon) to be small in order to prevent interference with the emission of electroluminescence (Page 7, Lines 46-47 and Page 11, Lines 44-48), Hosokawa is not explicit that “a width of the metallic structure that obstructs the light [from] the [observer] is not more than 10% of portions of the surface of the substrate that are in contact with the first electrode” (that the cross-sectional area the metallic structure in contact with the first electrode is 10% or less than the cross-sectional area of a surface of the substrate on which the first electrode is formed) because Hosokawa is silent regarding the overall cross-sectional area of the surface of the substrate on which the first electrode is formed.

Terao teaches a conventional cross-sectional area of the surface of the substrate on which electroluminescent layer structures are formed at 143×112 mm (or 143,000×112,000 μm) (Col. 10, Lines 6-10, for example). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the substrate size of Terao in the device of Hosokawa since the substrate allows for 960×240 picture elements capable of forming high-resolution images. Given the size of the substrate of Terao, no matter how long the metallic structure of Hosokawa

is, the metallic structure covers 10% or less than the cross-sectional area of a surface of the substrate on which the first electrode is formed. It has been held that where the general conditions of a claim are disclosed in prior art, discovering the optimum or working ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Response to Arguments

10. Applicant's arguments with respect to claims 1, 3 and 5-6 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew W. Such whose telephone number is (571) 272-8895. The examiner can normally be reached on Monday - Friday 9AM-5PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bradley W. Baumeister can be reached on (571) 272-1722. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Matthew W. Such/
Examiner, Art Unit 2891

MWS
3/20/08
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